

# Bulgaria's experience in the low carbon transition

Renewable Energy Benefits: Can South East Europe realise the full potential of the Energy Transition?

Julian Popov

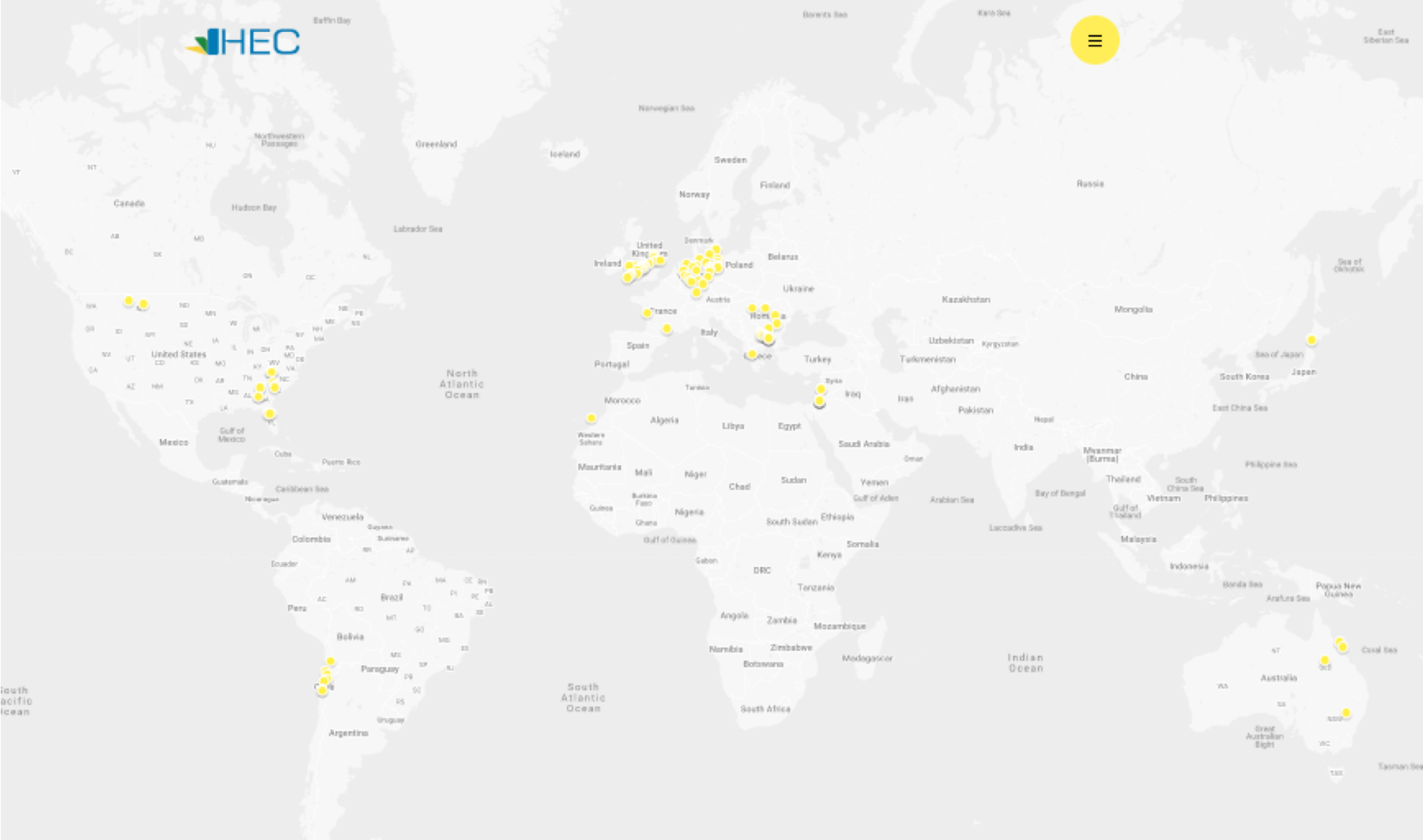
Sarajevo

11 June 2019

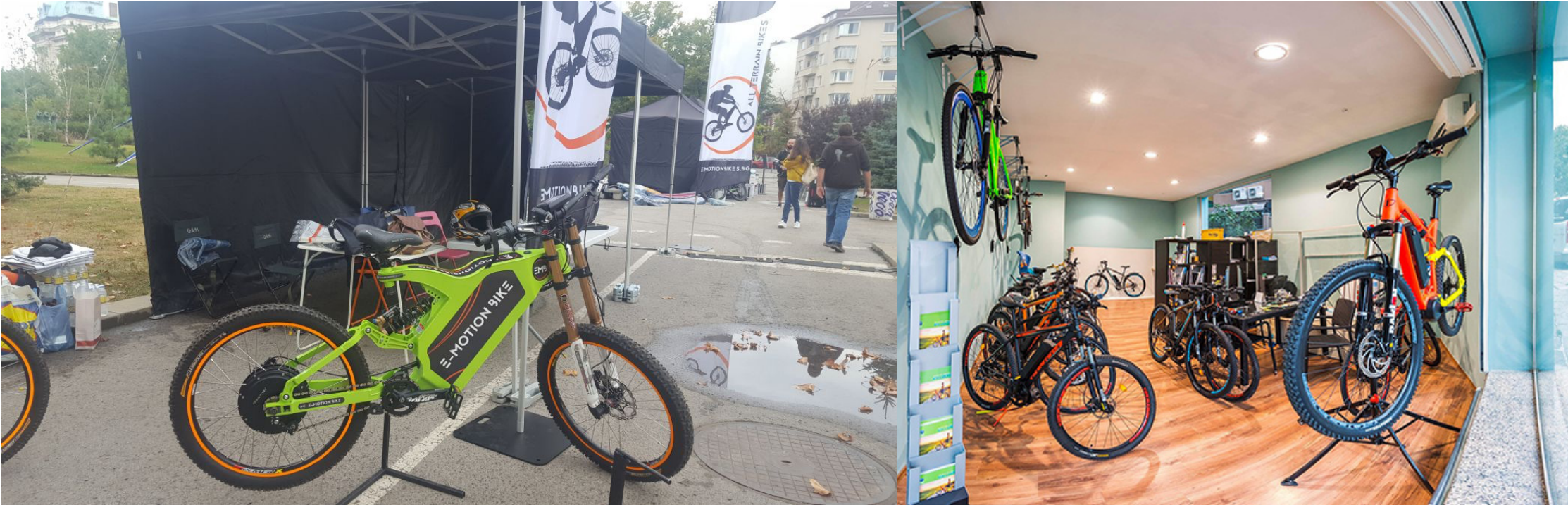
# Solar heating



# The unknown energy industry of Bulgaria



# The electric bicycles



# Spark



# The plastic recycling

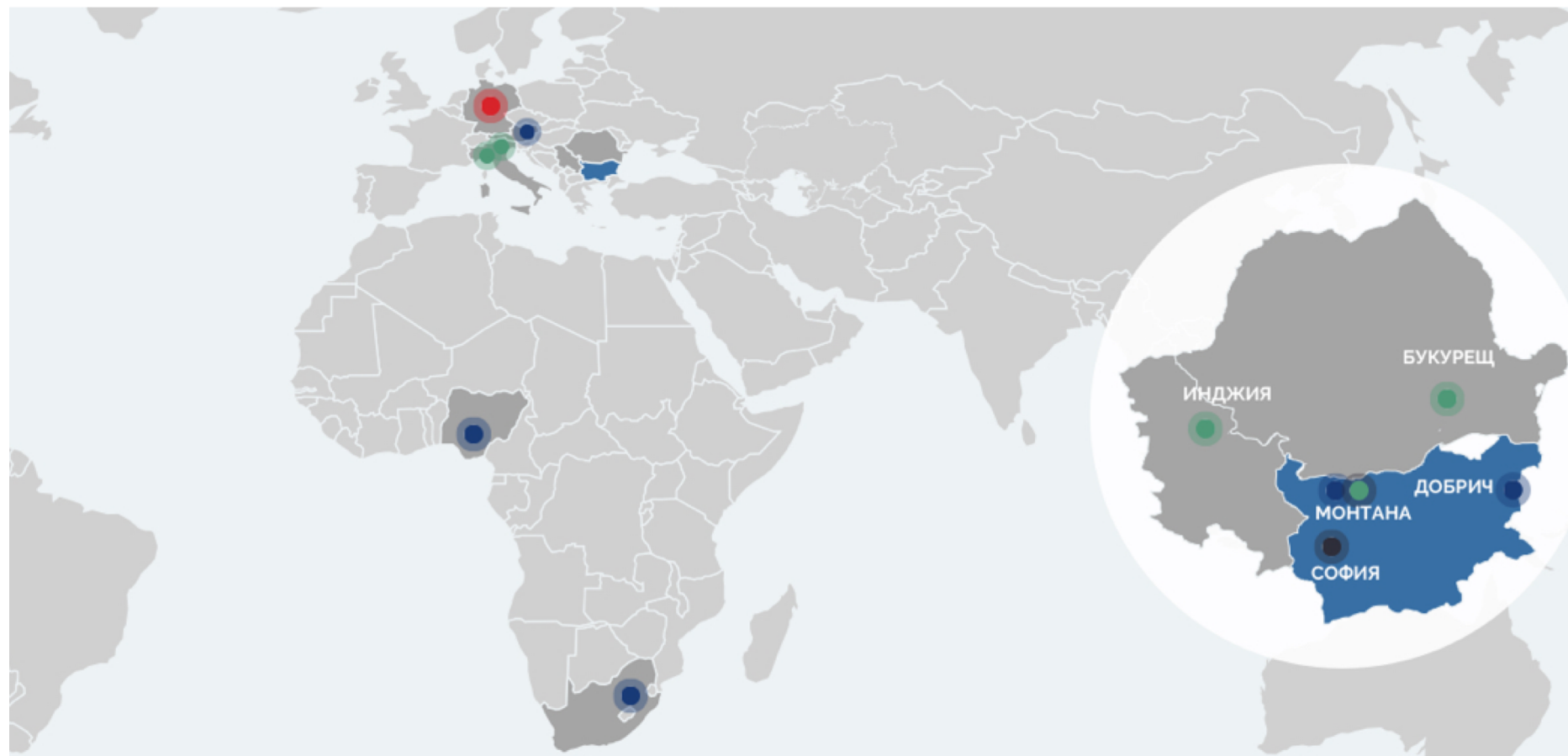


# Batteries



SHARE PERFORMANCE BGN 6.9 = 0%

Data delayed at least 60 minutes as 06-10-2019



# Electrify public transport





# Balkancar - ArcelorMittal



# Maritsa East



# Energy centre and an exceptional national and international infrastructure crossroad on a vast state owned single plot of land

- 70 years energy industry history: development started in 1948
- 240 km<sup>2</sup> low quality open cast lignite, high content of sulphur
- State own land unsuitable for agriculture
- The largest energy complex in the SEE
- 3 main lignite power plants, 3.3GW total generation capacity
- The heart of the Bulgarian national electricity grid
- Focal point of 3 new electricity Projects of Common Interest
- Crossroad of 3 EU transport corridors 4, 8 and 9
- Located near the main national gas ring
- By the route of the Bulgaria-Greece gas interconnector
- Close proximity to the 5<sup>th</sup> largest city in Bulgaria
- Relatively close distance to Sofia, Burgas (port) and Istanbul



## ME 3.0 could bring together a wide variety of new energy technologies

- Batteries
- Hydrogen
- Gas
- Biogas
- EV production
- EV components
- Smart meters
- Inverters
- Windows
- Ventilation systems
- New storage technologies
- LED
- 2G and 3G biofuels
- Cables
- IT for energy
- R&D
- Training
- Solar
- Conference centre
- Distance medicine
- AQM
- 3D printing
- Waste treatment
- Micro hydro turbines
- Solar heating
- Heat pumps
- Wind
- Smart building
- Public transport
- Wind components
- Drones
- Data centres
- ...and many others

# Lignite regions have valuable transition assets

- Large areas of land (ME – 240-460 sq km)
- Single owner, simple administration
- Strong grid
- Transport infrastructure
- Qualified workforce

# 8 conclusions

1. Deep transformation of the energy sector
2. Extensive transformation of the industry
3. South East Europe has exceptional low carbon and RES potential
4. If incumbents don't act, they would die
5. Entrepreneurs are much quicker and could expand rapidly
6. Base the transition on a wide variety of assets
7. We need much better regional connectivity
8. Act now

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